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INTERCHANGE

TRANSITION TO A FAST-MOVING SOCIETY



JULY-DECEMBER

2017

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READY TO TUNNEL

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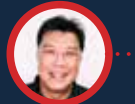


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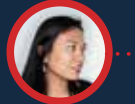
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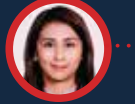
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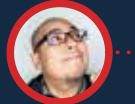


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DID YOU KNOW?

11 stations for the MRT Sungai Buloh-Serdang-Putrajaya (SSP) Line will have integration with existing and future rail services.

MRT Sungai Buloh-Kajang (SBK) Line Hotline:

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STARTING A NEW CHAPTER



It has been six months since we delivered the MRT Sungai Buloh-Kajang (SBK) Line and I am pleased to say that it has been a success with more than 22 million commuters using the line up to 31 December 2017. I believe that in time, the numbers will increase with more connections to adjacent commercial areas and when new development projects next to stations, and the Sungai Buloh-Serdang-Putrajaya (SSP) Line are completed.

With the opening of the SBK Line, MRT Corp's focus is now on the SSP Line. As at the end of the year, the overall project progress of SSP Line was at 19%. MRT Corp is on track to achieve our target of delivering the first phase by the third quarter of 2021 and the full line to be operational by 2022.

The task will not be easy but with the experience gained during the construction of the SBK Line, I believe we are more than ready to face the challenges that come our way.

One of these challenges is with tunnelling, which is the focus of the cover story of this edition of Interchange. The areas where the underground alignment will run through consist of different geological conditions; granite, Kenny Hill formation and KL limestone formations.

State of the art tunnel boring machines (TBM) will be used to achieve this feat considering the different conditions throughout the underground alignment of SSP Line. A total of 12 TBMs will be used for the 11.5km underground with eight of the TBMs being reused after refurbishment. They were originally used for the SBK Line.

This is the first time TBMs are being refurbished in Malaysia. This is being done in a plant in Pusing near Ipoh under a knowledge transfer programme which formed part of the Klang Valley MRT (KVMRT) Project. This is yet another testimony to the success in Malaysia gaining more than just a world-class public transport system with the KVMRT Project.

As with tunnelling for the SBK line, the Variable Density TBM which was designed specially for

tunnelling in the Klang Valley will also be used for the SSP Line.

In October 2017, the Government of Malaysia announced the approval for the development of the MRT Circle (CCL) Line. MRT Corp is currently carrying out preliminary activities to get the project off the ground.

One of these activities was the commencement of the tender process for the turn-key contractor to construct the line on 15 November 2017. As seen from the tender briefing on that day, interest has been tremendous, especially from local Malaysian companies.

With two lines in hand in 2018 and the years to come, it will certainly be a busy time for us all at MRT Corp. Before I pen off, I hope the public will be able to bear with the congestion due to the massive construction of the KVMRT Project. I hope everyone will be able to understand that this is for a better future for all who live in the Klang Valley.

Thank you.

DATO' SRI SHAHRIL MOKHTAR

**CHIEF EXECUTIVE OFFICER
MASS RAPID TRANSIT CORPORATION SDN BHD**

READY TO TUNNEL

THE LEGACY CONTINUES

The Variable Density Tunnel Boring Machine (TBM) is a slurry machine designed for several modes of tunnelling in both slurry and Earth Pressure Balance, with a facility to vary the density of slurry. With the machine, increased levels of automation and controls were introduced to reduce human errors. The variable density enhancement that led to this technological innovation is the first of its kind in the world.

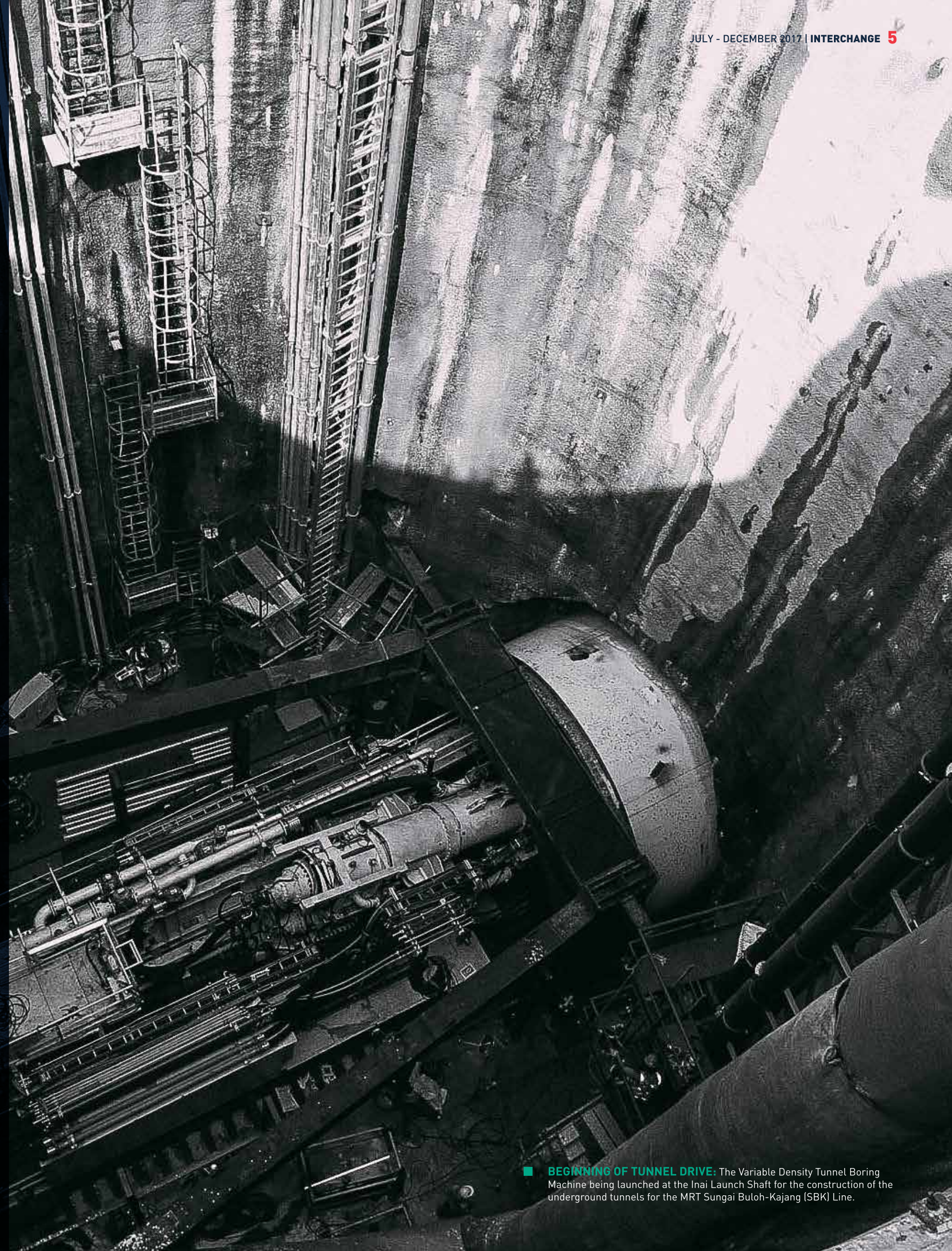
The TBM is the safest method of tunnelling for KL geological conditions, as compared to the conventional drill and blast method. The TBM produces less environmental impact in terms of dust and noise emission, as well as visual impact. The machine also causes minimal ground disturbance, as it does not affect the integrity of the existing buildings above ground. The design of the TBM provides safer working environment for the TBM operators as the rings that are built on-the-go throughout the excavation process protects the operators from potential soil hazard.

“

**THIS TECHNOLOGICAL INNOVATION IS THE FIRST OF ITS
KIND IN THE WORLD**

”

Eight TBMs were used during the construction of the underground section of the SBK Line, where the total length constructed was 9.5km - from the Semantan North Portal till the Maluri South Portal. Refurbishment works have been done on the eight TBMs for them to be used for the construction of the MRT Sungai Buloh-Serdang-Putrajaya Line.



BEGINNING OF TUNNEL DRIVE: The Variable Density Tunnel Boring Machine being launched at the Inai Launch Shaft for the construction of the underground tunnels for the MRT Sungai Buloh-Kajang (SBK) Line.

TUNNEL BORING MACHINE 2.0

For the construction of the MRT Sungai Buloh-Serdang-Putrajaya (SSP) Line, four new TBMs were purchased from the Herrenknecht Tunneling Machinery Co. Ltd. Similarly for the first MRT line, the eight TBMs from the SBK Line were also manufactured and developed by Herrenknecht. Along with the eight refurbished TBMs, a total of 12 TBMs will be used to complete the SSP Line.

The new TBMs have been designed with improvements made on it based on the experience gained from operating it during the

construction of the SBK Line underground tunnels.

During the construction of the SBK Line, there were occurrence of TBM downtime due to slurrified box blockage during the process of mucking out, where excavate materials were taken out usually via a slurry pipe. Modifications were made to the mucking system to increase efficiency. Performance of the cutterhead was also improved, enhanced by application of better wear and tear protection.

VARIABLE DENSITY TUNNEL BORING MACHINE

The Variable Density TBM is a slurry machine designed for several modes of tunnelling, namely slurry and Earth Pressure Balance modes, with a facility to vary the density of slurry. With the machine, increased levels of automation and controls were introduced to reduce human errors in tunnelling works.

The variable density enhancement that led to this technological innovation is the first of its kind in the world.

TBMs provide the safest method of tunnelling in Kuala Lumpur's geological conditions, compared to the conventional drill and blast method. The TBM produces less environmental

“SAFEST METHOD OF TUNNELLING IN KUALA LUMPUR'S GEOLOGICAL CONDITIONS”

impact in terms of dust and noise emission as well as visual impact.

The machine also causes minimal ground disturbances as it does not affect the integrity of existing buildings above ground. TBMs also provide a safer working environment for operators as the rings that are built on-the-go throughout the excavation process protects the machine operators from potential soil hazard.

Eight TBMs were used during the construction of the underground section of the SBK Line. The total length constructed was 9.5km between the Semantan Portal and the Maluri Portal.



THE MACHINE: The cutting wheel of the Variable Density Tunnel Boring Machine - the front end of the 135m-long machine that will bore through surfaces for the construction of the underground tunnels for the SSP Line.



TUNNEL EXCAVATION: The pressurised excavation chamber of the Variable Density Tunnel Boring Machine that removes the excavated materials.





■ **MILESTONE EVENT:** (from left) Division Manager Herrenknecht AG Frederic Battistoni, General Manager of Tunnelling MMC-Gamuda KVMRT (T) Sdn Bhd Ng Hau Wei, Director - Underground Works SSP Line (Tunnels) MRT Corp Blaise Mark Pearce, Director of Communications and Stakeholder Relations MRT Corp Datu Najmuddin Abdullah, Director of Tunnelling MMC-Gamuda KVMRT (T) Sdn Bhd Gustav Klados, Managing Director of Guangzhou Herrenknecht Tunnelling Machinery Co. Ltd. at the Guangzhou Herrenknecht Tunnelling Machinery Co. Ltd. in Guangzhou, China for the Factory Acceptance Test with the Malaysian Media event.

FACTORY ACCEPTANCE TEST

Before the four new TBMs were shipped to Malaysia, a Factory Acceptance Test (FAT) was carried out on the TBMs where engineers would go through a checklist that spans over 43 pages. The FAT is a validation process that takes place to demonstrate that the system and manufacturing designs meet the specifications in accordance to the contract set by the client – a process where the client MMC Gamuda KVMRT (T) Sdn Bhd and MRT Corp as the project owner, jointly assess the machines' readiness for performance with the manufacturer.

During the process, 450 items were checked before the final certificate of fitness was given by the client to the manufacturer. This signified that the TBM was ready to be transported to the tunnelling site in Malaysia.

“**450 ITEMS WERE CHECKED BEFORE THE FINAL CERTIFICATE OF FITNESS WAS GIVEN BY THE CLIENT TO THE MANUFACTURER**”

Upon completion of the FAT, the TBMs would be delivered to the tunnelling site in parts, where they would be assembled. This process can take up to two months before the gigantic machines start any boring works. Any delay in the chain would lead to irreversible delay on the delivery dates.

THE ROAD AHEAD

As with the SBK Line, a team of young engineers were also sent to China to be trained as tunnel engineers for the project, where upon their return they would be operating the TBMs in constructing the SSP Line. These engineers would add to the local talent pool in developing infrastructure projects for the country.

For the construction of the SSP Line, the first TBMs are expected to be launched at the future Bandar Malaysia North Station site in the first quarter of 2018, while the last is scheduled for launching in 2019 at the future Conlay MRT Station site. A total of 13.5km will be bored as part of the 52.2km alignment.

The construction of the underground section poses one of the biggest challenge for the MRT Project due to technical difficulties. With



■ **MEDIA VISIT:** Members of the media were brought from Malaysia to the Herrenknecht Tunnelling Machinery Co. in Guangzhou, China to witness the Factory Acceptance Test on the Tunnel Boring Machines.

improved knowledge and lessons learnt from the construction of the SBK Line, the SSP Line is expected to see far less problems.

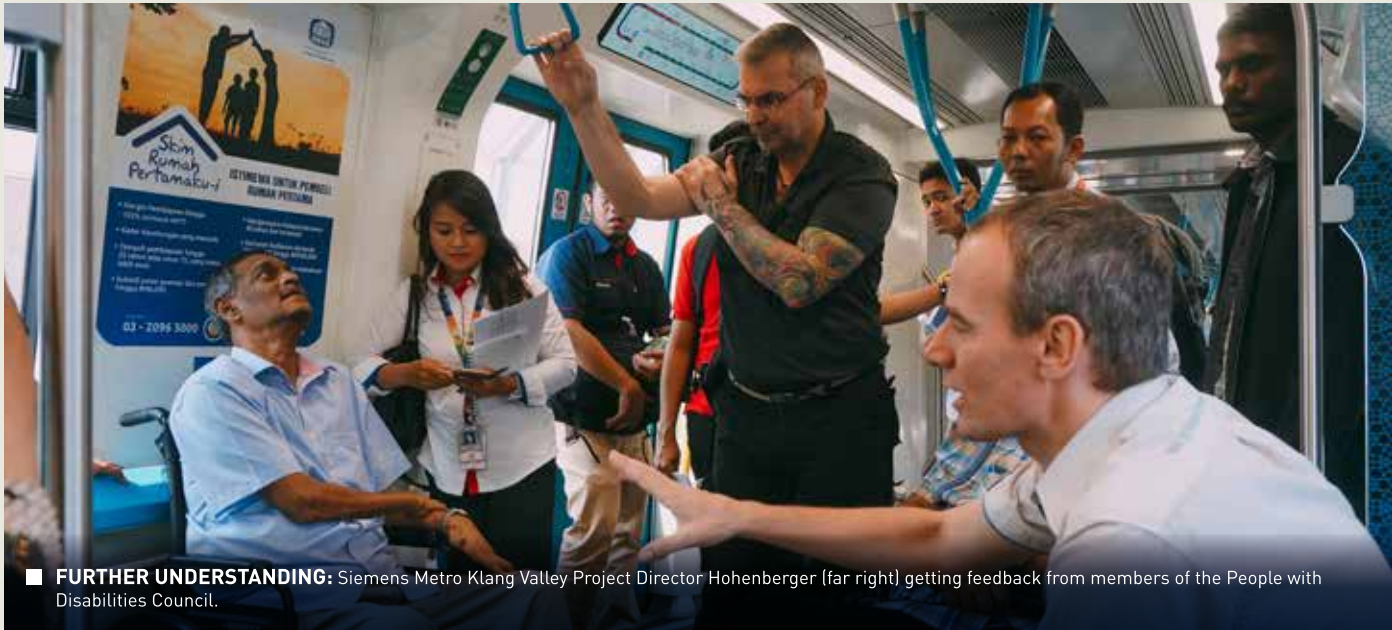
The legacy now continues as the combination

“**A TOTAL OF 13.5KM WILL BE BORED AS PART OF THE 52.2KM LONG ALIGNMENT**”

of improved machinery, better knowledge and a more confident team from the experience harnessed from tunnelling the SBK Line, Malaysia can now expect a more capable team in manoeuvring through the challenging geological condition of Kuala Lumpur. 🚧



■ **AT THE FACTORY:** Workers at the Herrenknecht Tunnelling Machinery Co. Ltd. in Guangzhou, China working on the Tunnel Boring Machines.



■ **FURTHER UNDERSTANDING:** Siemens Metro Klang Valley Project Director Hohenberger (far right) getting feedback from members of the People with Disabilities Council.

WHEELCHAIR STRAP BELT TESTING

IN efforts of moving forward to help increase the convenience of commuters using the Mass Rapid Transit (MRT), members from the People with Disabilities Council visited the MRT Sungai Buloh- Kajang Line (SBK) Line on 6 October 2017.

The aim for the visit was for them to test out strap belts that will be installed for individuals on wheelchairs for the SBK Line trains.

Siemens Malaysia Sdn Bhd, the contractor for delivering the MRT trains, had representatives joining the visit. Prasarana Malaysia Berhad representatives were also present as the operator of the SBK Line.

The visit was led by International Islamic University Malaysia (IIUM) Disability Unit Head Dr Ruzita Mohd Amin. The visitors gave feedback about the strap belts.

The delegation took a train ride from Kwasa Sentral MRT Station to Taman Suntex MRT Station, giving them ample time to give their feedback.

Siemens Metro Klang Valley Project Director Mr Patrick Hohenberger explained to the delegates that there will be six strap belts installed in all trains. Two sets of strap belts will be installed in the front and back car trains while the other two middle cars will have one set of strap belts each.

Feedback was obtained by all parties involved and the necessary measures to be taken for the future were duly noted.

The delegation had lunch at the Kwasa Sentral MRT Station at the end of the visit. 🍽️



CLQ & WORKERS ACCOMMODATION SEMINAR 2017

MASS Rapid Transit Corporation Sdn Bhd (MRT Corp) organised a Centralised Labour Quarters (CLQ) and Workers Accommodation Seminar 2017 at the KVMRT Training Centre, Sungai Buloh on 7 September 2017.

Attendees of the day included employees from MRT Corp, MMC-Gamuda KVMRT (PDP SSP) Sdn Bhd, Work Package Contractors (WPCs) for the MRT Sungai Buloh-Serdang-Putrajaya (SSP) Line and several government agencies.

The purpose of this seminar was to educate the attendees on various issues regarding foreign workers.

CIDB Malaysia Construction, Quality and Safety Division Senior Manager Encik Khairunnizam Sulaiman kicked things off when he presented a case study on 'Change for Temporary Construction Site, Workers' Amenities and Accommodation.'

Selangor Health Department Communicable Disease Control Unit Public Health Specialist Dr Noriah Ismail then took over the floor by presenting a paper on 'Infectious Diseases Surveillance and Statistics on Communicable Diseases Among Foreigners in Selangor.'

Thereafter, Department of Labour Peninsular Malaysia Deputy Director General (Operations) Encik Wan Zulkifli Wan Setapa (picture) gave a talk on 'Managing Foreign Workers and Current Labour Scenarios in Malaysia.'

He talked about the current policies and laws regulating foreign workers in the country.

Immigration Assistant Officer Encik Mohd Zulhairi Mohd Nor then discussed the 'Legislation and Procedure of Handling Foreign Workers.' He also explained the various reasons why the number of illegal workers in Malaysia is high.

The final speaker was Fire Department and Rescue Malaysia Fire and Safety Division Officer Tuan Amiruddin Shukri Omar. He had a presentation that talked about the accommodation requirements for construction workers in the country.

The presentation mainly focused on identifying fire hazards and understanding fire safety risks that will present itself in the workers' accommodation.

This seminar was seen as a success as all attendees managed to take steps in improving and gaining further understanding about foreign workers' legislation and accommodation needs. 🙌

SENTUL POLICE QUARTERS DEMOLISHED TO ENABLE MRT TUNNEL CONSTRUCTION

TWO blocks of 16-storey flats which housed the Sentul Police Quarters in Sentul, Kuala Lumpur, were demolished to enable tunnelling works for the MRT Sungai Buloh-Serdang-Putrajaya (SSP) Line to proceed.

The piles for the 40-year-old buildings were in the way of the tunnel boring machine (TBM) path and as a result, the buildings had to be demolished and the piles extracted before tunnelling works could take place.

Mass Rapid Transit Corporation Sdn Bhd (MRT Corp) SSP Line Project Director Dato' Amiruddin Ma'aris said the MRT tunnels had to be built at that location to enable it to pass near the Titowangsa LRT and monorail stations. This would enable the future Titowangsa MRT Station to integrate with the two existing stations.

The 270 families who were living in the quarters were now temporarily housed at

the Teratai Residence apartments in Setapak while waiting for the completion of the new replacement police quarters which were being built in Taman Keramat AU1.

The new quarters are expected to be ready in December 2018.

On 27 September 2017, MRT Corp took the opportunity to bring the media to the site to witness how the demolition works were being carried out.

Briefing the media during the visit, Amiruddin said the highest safety standards were being followed to ensure that the works were carried out without damaging neighbouring property or endangering lives.

"This is a very built-up area, so we cannot afford to have any untoward incident happening," he said.

Amiruddin said demolition works began in June 2017. The works were completed in December 2017.

Elaborating on the demolition process, MMC-Gamuda KVMRT (T) Sdn Bhd Safety, Health and Environment Head Mr Chris Fenton said two methods were used to demolish the buildings.

He said for the top three floors, the buildings were cut into pieces using diamond cutters and then lowered by crane. Once these floors were removed, crushers were used to demolish the

other floors until ground level. MMC-Gamuda is the underground works contractor for the SSP Line.

On the replacement quarters, MMC-Gamuda General Manager Encik Mohd Fuad Kamal Ariffin said the construction of the new quarters were proceeding well.

"In the meantime, besides providing temporary accommodation, the MRT Project also provided other forms of assistance such as school buses to enable the children to get to the schools that they were already enrolled in," he said.

Held at the site of the Sentul Police Quarters itself, the briefing began with an update on the progress of the MRT Sungai Buloh-Serdang-Putrajaya (SSP) Line followed by presentation on the activities conducted for the demolition and relocation.

The media also had the opportunity to witness a demonstration of the demolition method used.

Amiruddin started the briefing by sharing the overall construction progress of the SSP Line was at 13.7% and proceeding according to schedule. 🚧



■ **CRUSHER ACTION:** Demonstration of the crusher demolishing one of the floors of the Sentul Police Quarters.



MRT CORP WINS PRIME MINISTER'S INNOVATION AWARD 2017

MASS Rapid Transit Corporation Sdn Bhd (MRT Corp) won the main prize of the Prime Minister's Innovation Award 2017 (AIPM) for being the "Ideal Project Management in Governance Iconography".

The main prize brought MRT Corp grant prize of RM1 million, trophy and certificate. The award was presented by Prime Minister YAB Dato' Seri Mohd Najib Tun Abdul Razak during the AIPM 2017 ceremony held on 7 November 2017 at the Putrajaya International Convention Centre.

AIPM has been organised by the Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) since

2009 and is the highest award for the public sector in recognising the efforts of achieving innovation in public sector's excellence.

AIPM's assessment is done through committees, the Nomination Committee and the Selection Committee with members consisting high ranking government officials and leading individuals, academia and non-governmental organisations.

A total of 111 entries were received for the AIPM 2017 where nine nominees were shortlisted. The Selection Committee then deliberated on five finalists. 📄



MRT CORP TRIUMPHS AT BE INSPIRED AWARDS 2017

IT was a momentous day for Mass Rapid Transit Corporation Sdn Bhd (MRT Corp) as the organisation emerged as the winner of the Building Information Modelling (BIM) Advancements in Rail and Transit Category that was presented during the Be Inspired Awards 2017 held at Marina Bay Sands, Singapore on 12 October 2017.

The application of the BIM technology is currently being incorporated for the MRT Sungai Buloh-Serdang-Putrajaya (SSP) Line.

The awards were presented as part of the Bentley Systems' Year in Infrastructure Conference 2017 that was held from 10 October 2017 - 12 October 2017.

BIM (Building Information Modeling) is an intelligent 3D model-based process that gives architecture, engineering, and construction (AEC) professionals the insight and tools to more efficiently plan, design, construct, and manage buildings and infrastructure.

Bentley Systems (Bentley) is a software development company that supports the professional needs of those responsible for creating and managing the world's infrastructure, including roadways, bridges, airports, skyscrapers, industrial and power plants as well as utility networks.

The level utilisation of BIM in the construction of the SSP Line not only in the use of intelligent three-dimensional modelling for design and construction - which greatly reduced conflicts in design - but in the efficient shared-accessibility of such modelling data by over 1,500 users in various organisations project-wide without any compromise in accuracy.

Two other organisations were shortlisted in the category which were China Railway Eryuan Engineering Group Co Ltd and Jacobs/Zephyr, U.S.A. 📄

MRT CORP DOUBLE VICTOR AT ASIA GEOSPATIAL EXCELLENCE AWARDS 2017



VICTORY was on the cards for Mass Rapid Transit Corporation Sdn Bhd (MRT Corp) in the Asia Geospatial Excellence Awards 2017.

The organisation won two awards during the Gala Dinner and Awards Night that was held at Marriott Putrajaya on 23 August 2017.

The first award was in the Transport Infrastructure Category for its Building Information Modelling (BIM) Level 2 Implementation throughout the design and construction of MRT Sungai Buloh-Serdang-Putrajaya (SSP) Line.

BIM is a process for creating and managing information on a construction project across the project lifecycle in a virtual environment. It allows users to visualise, collaborate and analyse every aspect in engineering design.

The second award won by MRT Corp was in the Digital Engineering Category for the use of Geographical Information System (GIS) for the MRT SSP Line. It was a collaborative effort from MRT Corp, MMC-Gamuda KVMRT (T) Sdn Bhd and AECOM Asia.

GIS is an advanced mapping tool that is designed to capture, store, manipulate, analyse, manage and present all types of geographical data. GIS allows data from all departments, unified and presented on an interactive map, enabling decisions making and answer tough questions both quickly and effectively.

These awards recognise the exemplary innovations and practices in geospatial information and technology. 📄



■ **THE WINNERS:** A group photo of the individuals from MRT Corp, MMC-Gamuda KVMRT (T) Sdn Bhd and AECOM Asia posing for a photo after accepting the Digital Engineering award.



MINISTER of Women, Family and Community Development Dato' Sri Rohani Abdul Karim visited the MRT Sungai Buloh-Kajang Line on 7 August 2017.

Twelve members of the National Council of Persons with Disabilities and eight senior citizens joined Rohani for the visit.

Rohani arrived at the Tun Razak Exchange Station and was given a tour of the station by Mass Rapid

Transit Corporation Sdn Bhd (MRT Corp) Sungai Buloh-Kajang (SBK) Line Project Director Datuk Marcus Karakashian.

Karakashian explained to Rohani that this station is the deepest underground station.

Due to the depth of the station, there are two sets of lifts; one lift catering to individuals from the street level to the unpaid concourse level and another from

the paid area of the concourse level to the platforms.

He said features for people with disabilities had been catered, such as special wider lanes at the automatic fare collection gates for individuals on wheelchairs and tactile tiles for those who were visually impaired.

The delegates then took a train to the Muzium Negara MRT Station.

MINISTER OF WOMEN, FAMILY AND COMMUNITY DEVELOPMENT VISITS MRT PROJECT

"I am glad that I managed to have a ride on the MRT service and I feel excited for what is to come in the future. MRT Corp has managed to cater for the disabled community and I believe the same will be done in the future," said Rohani.

The visit ended with Rohani and the delegation returning to the Tun Razak Exchange MRT Station. 📄

PETALING JAYA MAYOR RIDES THE MRT

PETALING Jaya Mayor Dato' Mohd Azizi Mohd Zain visited the MRT Sungai Buloh-Kajang Line on 1 November 2017. He was accompanied by seventeen officers from the Petaling Jaya City Council (MBPJ).

The mayor was welcomed by Mass Rapid Transit Corporation Sdn Bhd (MRT Corp) MRT Sungai Buloh-Kajang (SBK) Line Elevated Construction Director Encik Kamarul Baharim Yusoff, MMC-Gamuda KVMRT (PDP) Sdn Bhd Deputy Project Director Encik



■ **ENTERING STATION:** Petaling Jaya Mayor Dato' Mohd Azizi Mohd Zain (middle) tapping his Touch 'N Go card to go through the automatic fare collection gates at the Bandar Utama MRT Station.

Maslan Othman, Prasarana Malaysia Berhad (Prasarana) MRT SBK Line Chief Operation Officer Tuan Haji Muhammad Isom Aziz at the Bandar Utama MRT Station.

The aim for this visit was to understand the facilities that the MRT service provided and also to gain understanding on the stations that were within MBPJ's jurisdiction.

At the station Azizi was briefed about the Bandar Utama linkway. This link connects the station to

the shopping mall and is currently being built by See Hoy Chan Sdn Bhd.

From the Bandar Utama MRT Station, the delegates hopped onto the train and proceeded towards the Mutiara Damansara MRT Station. Here, they proceeded to the Surian Tower link bridge to understand the connectivity between the station and the Mutiara Damansara commercial area.

They proceeded to the Kampung

Selamat MRT Station. This station is the final station that is under MBPJ's jurisdiction.

The visit ended with the delegates heading to the Surian MRT Station with lunch being served at Hameediyah, a nasi kandar outlet that is just a stone's throw away from the station. 📄



SPOT THE MRT TRAIN & CATCH THE MRT CRUISER PRIZE GIVING CEREMONY

HARI CERIA BERSAMA MRT CORP



THIRTY children aged four to six years old from three kindergartens in Seri Kembangan participated in the inaugural Hari Ceria Bersama MRT Corp programme on 19 September 2017.

The kindergartens involved in this programme were: Tadika Bukit Puchong, Tadika Putra Perdana and Tadika Luqman The Atmosphere.

Held at the MRT Information Centre Sri Kembangan, this initiative was a collaborative effort between Mass Rapid Transit Corporation (MRT Corp) Sdn Bhd and the Project Delivery Partner for the MRT Sungai Buloh-Serdang-Putrajaya (SSP) Line, MMC-Gamuda KVMRT (PDP SSP) Sdn Bhd.

The aim for this programme was to educate the young about the MRT Project and the importance of public transportation.

Kicking off the programme, the children participated in a colouring contest that was organised for them. They were given an hour to complete the colouring of a train that will be used for the SSP Line.

Upon completion of the colouring contest, a jigsaw puzzle completion contest took place.

TWO campaigns were organised by Mass Rapid Transit Corporation Sdn Bhd (MRT Corp) prior to the opening of Phase Two of the MRT Sungai Buloh-Kajang (SBK) Line to increase awareness about the new service which began on 17 July 2017.

The "Spot the MRT Train" and "Catch the MRT Cruiser" campaigns were carried out between 30 May 2017 and 20 June 2017.

The "Spot the MRT Train" campaign comprised of a photography contest where participants were required to take a photo of the MRT train undergoing test runs along the southern alignment of the SBK Line which were then uploaded onto their Instagram pages, with #SpotTheMRT and tag @MRTMalaysia to enter the competition.

The top prize winner was Encik Muhammad Imran Zikri. Imran, aged 17, managed to take home a GoPro Hero5 Black 4K Ultra HD Camera. The second and third prize winners

won a Ricoh Theta S Camera and a DJI Osmo Mobile camera while 10 other consolation prize winners took home shopping vouchers worth RM 100 each.

For the "Spot the MRT Cruiser" campaign, the MRT Cruiser 4x4 vehicle was parked at 12 different stations along the SBK Line southern and underground sections of the SBK Line.

Members of the public were encouraged to drop by the cruiser and participate in quiz where they were to name the places of interest around each location by posting them on the MRT Malaysia Facebook page.

They were then given limited editions MRT Touch 'N Go's cards and other MRT merchandise such as umbrellas, t-shirts, notebooks and puzzles.

This campaign that attracted close to 1,000 participants. The participants also could participate in a lucky draw that enabled them to win shopping vouchers worth RM 200 each.



THE naming of the Semantan MRT Station as Manulife Semantan Station was celebrated on 21 August 2017.

A launch presentation continued by a celebration toast were held as part of the event at the Manulife Semantan Station itself.

The event was organised by Manulife Malaysia (Manulife) in conjunction with it being a licensee with Mass Rapid Transit Corporation (MRT Corp) Station Naming Rights Programme.

The programme would allow a licensee's name, logo or product branding to be associated with a station.

Four licenses have been taken up so far. The other three are Pavillion Pusat Bandar Damansara, Pavillion Kuala Lumpur Bukit Bintang and AEON Maluri.

MRT Corp Commercial and Land Management Director Dato' Haris Fadzilah Hassan, represented the organisation at the event.

During the media conference held during the event, he said that the licensees from the Station Naming Rights Programme would benefit from the high volume of commuters as well as high visibility of the MRT stations.

Haris also shared that Manulife will not only benefit from the exposure of one station but also the opportunity to leverage on its brand being mentioned throughout the whole alignment where Manulife Semantan Station appear on all the maps at the stations and trains, as well as announcements in the trains.



THE staff of Mass Rapid Transit Corporation Sdn Bhd (MRT Corp) have pledged not to be involved in corrupt practices when performing their duties by taking a Corruption-Free Pledge.

The mass reciting of the pledge was held on 6 October 2017 at the Matrade Exhibition and Convention Centre in Kuala Lumpur.

The pledge was witnessed by Malaysian Anti-Corruption Commission (MACC) Chief Commissioner Tan Sri Dzulkifli Ahmad who was the guest of honour of the event.

The pledge was read out by MRT Corp Chief Executive Officer Dato' Sri Shahril Mokhtar and was repeated by everyone else.

In the pledge, the staff of MRT Corp promised to reject all forms of corruption and abuse of power and not indulge in any act of corruption and abuse of power in any dealings concerning MRT Corp.

They also pledged to give their full cooperation to MACC in preventing corruption and abuse of power.

The senior leadership team and Board of Directors the signed copies of the pledge, witnessed by Dzulkifli and Azam.

Earlier before the pledge-taking, there was also an executive talk by MACC Deputy Chief Commissioner (Operations) Dato' Sri Haji Azam Baki who touched on the issue of corruption happening in the public and private sectors in Malaysia.

MRT Corp Chief Executive Officer Dato' Sri Shahril Mokhtar then delivered an opening speech, highlighting that it was the company's responsibility to guide, give advice and remind everyone in MRT Corp not to get involved in corruption, abuse of power and irregularities to avoid negative image to the company.

In his keynote address, Dzulkifli mentioned that the pledge was an initiative started by MACC to curb corruption in Malaysia.

He congratulated MRT Corp on the company's implementation of anti-corruption initiatives.

During the ceremony, 537 application forms by MRT Corp employees to become members of the Sahabat Gerakan Revolusi Anti Rasuah SPRM (GERAH) was handed over to MACC.

GERAH is meant to be the catalyst for change within society, getting the public to reject and hate corruption and abuse of power.



TENDER FOR MRT 3

MASS Rapid Transit Corporation Sdn Bhd (MRT Corp) held a briefing session to potential contractors for the MRT Circle (CCL) Line on 15 November 2017.

The briefing session marked the start of the tender for the turn-key contractor for the CCL Line. Besides handling the construction of the CCL Line on a turn-key basis, the prospective contractor is also required to play the role of arranger for the financing of the project.

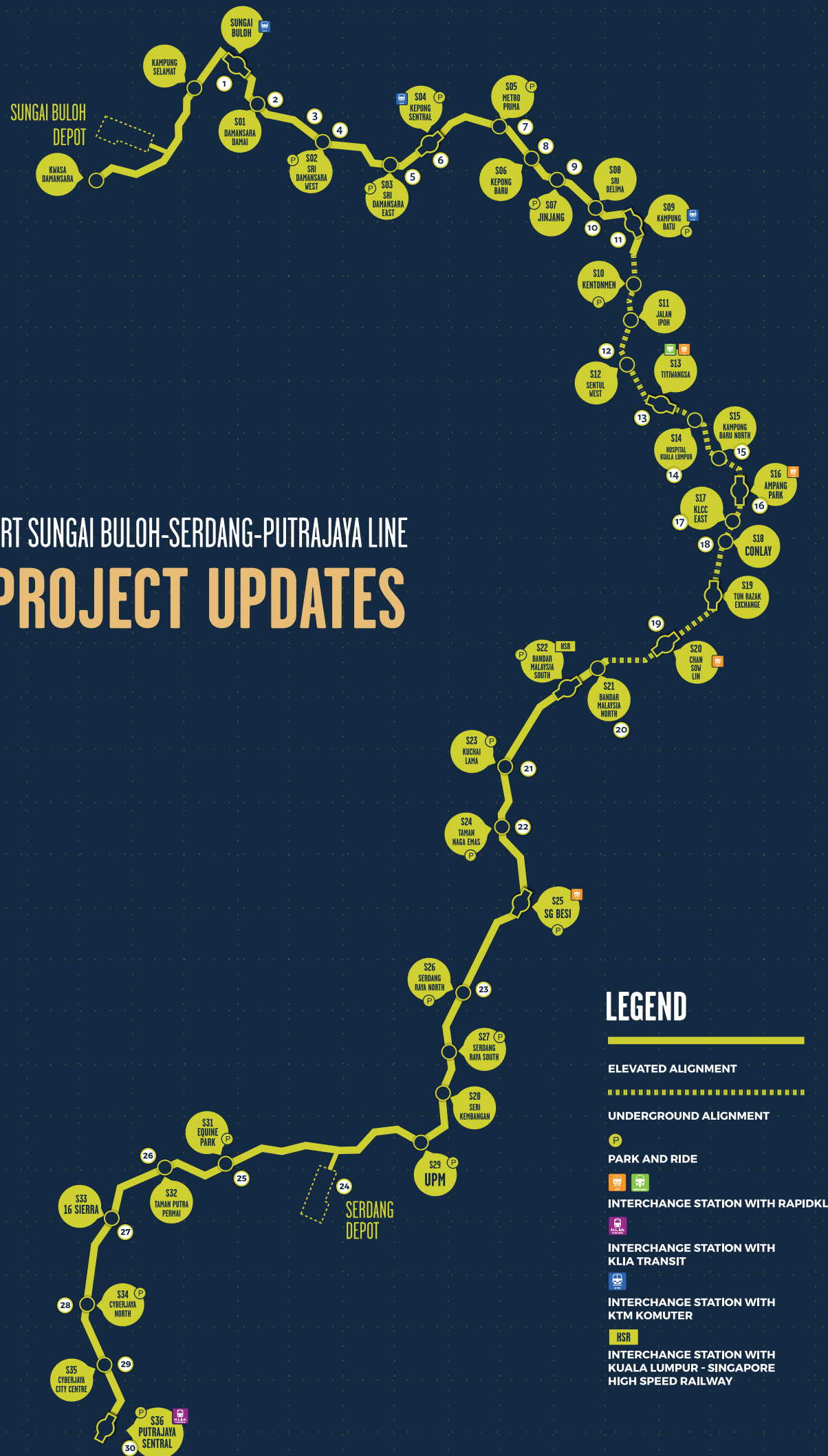
The CCL Line - the third line of the Klang Valley MRT Project - is expected to be about 40km and will encircle the city centre of Kuala Lumpur. Around 32km of the alignment will be underground.

The Government had given the green light for the development of the CCL Line to proceed on 30 October 2017.

The high turn out at the briefing session, which saw more than 100 local and foreign companies represented, indicated the high level of interest in the project.

The job scope will involve engineering, procurement, construction, testing and commissioning of tunnels, viaducts, stations, depots, trackworks, rolling stock, signalling, power supply and other associated works.

MRT SUNGAI BULOH-SERDANG-PUTRAJAYA LINE PROJECT UPDATES



LEGEND

- ELEVATED ALIGNMENT
- UNDERGROUND ALIGNMENT
- PARK AND RIDE
- INTERCHANGE STATION WITH RAPIDKL
- INTERCHANGE STATION WITH KLIA TRANSIT
- INTERCHANGE STATION WITH KTM KOMUTER
- INTERCHANGE STATION WITH KUALA LUMPUR - SINGAPORE HIGH SPEED RAILWAY

1 Construction of viaduct pier in progress in Sungai Buloh.	2 Construction of viaduct pier at the Damansara Damai MRT Station site.	3 Launching of Segmented Box Girders to construct the viaduct near Muhibbah Showroom.	4 Micropile works in progress at the Sri Damansara West MRT Station site.	5 Rock hacking works for station pile cap at the Sri Damansara East MRT Station site.
6 Ongoing Load Test at the Kepong Sentral MRT Station site.	7 Ongoing construction of pile caps at the Metro Prima MRT Station site.	8 Segmented Box Girder launch in progress at the Kepong Baru MRT Station site.	9 Pier head construction in progress at the Jinjang MRT Station site.	10 Site enabling works for station piers construction at the Sri Delima MRT Station site.
11 Piers construction in progress at the Kampung Batu MRT Station site.	12 Diaphragm Wall being done at the Sentul West MRT Station site.	13 Steel reinforcement works for the RC structure at the Titiwangsa MRT Station site.	14 Ongoing grouting works at the Hospital Kuala Lumpur MRT Station site for tunnel works.	15 Ongoing Diaphragm Wall construction works at the Kampung Baru MRT Station site.
16 Soil grabber that is being used for Diaphragm Wall construction at the Ampang Park MRT Station site.	17 Ongoing Diaphragm Wall construction works at the KLCC East MRT Station site.	18 Ongoing secant bore pile works at the Conlay MRT Station site.	19 View of the establishment works at the Chan Sow Lin MRT Station site.	20 Ongoing excavation works at the Bandar Malaysia North MRT Station site.
21 Hacking and demolition of existing building nearby the Kuchai Lama MRT Station site.	22 Bored piling works in progress at the Taman Naga Emas MRT Station site.	23 Ongoing site clearance works at the Serdang Raya North MRT Station site.	24 Construction of pile column in progress at the Serdang Depot.	25 Construction of pile cap at the Equine Park MRT Station site.
26 Ongoing bored pile works at the Taman Putra Permai MRT Station site.	27 Piloting works in progress at the 16 Sierra MRT Station site.	28 Aerial view of the earthworks, constructing ingress and egress and hoarding installation in progress at the Cyberjaya North MRT Station.	29 Piers construction in progress at the Cyberjaya City Centre MRT Station.	30 Pile cap works at the Putrajaya Sentral MRT Station site.



SEMINAR ON CHALLENGES IN DELIVERING THE KVMRT

A SEMINAR on the challenges in delivering the Klang Valley Mass Rapid Transit (KVMRT) Project was held at The Royale Chulan Damansara on 22 August 2017.

The seminar was organised by Gabungan Jurutera Perunding Bumiputera Malaysia (GJPBM) in collaboration with Mass Rapid Transit Corporation Sdn Bhd (MRT Corp) to serve as a platform for rail industry players to acquire knowledge on the challenges faced during the construction of the MRT Sungai Buloh-Kajang (SBK) Line.

Chairman of GJPBM and MRT Corp's board member Datuk Dr Ir Abdul Latif Mohd Som, gave a welcome note to start the seminar.

Minister in the Prime Minister Department Dato' Sri Hajah Nancy Shukri then delivered a speech and proceeded to officiate the seminar.

A keynote address by Professor Dr Ahmad Farhan Mohd Sadullah from Universiti Sains Malaysia and a Suruhanjaya Pengangkutan Awam Darat (SPAD) Member of Commission followed after.

MRT Corp's Planning and Design Er Poh Seng Tiok was the first speaker and he presented the overall planning and concept in line-wide design and alignment. He began with frameworks for planning and design followed by railway scheme design, public inspection, value management, design improvements and ended with the adoption of innovations and digital engineering advancement for the second MRT line, the Sungai Buloh-Serdang-Putrajaya (SSP) Line.



■ **OPENING SPEECH:** Datuk Dr Ir Abdul Latif Mohd Som giving his welcome address.

Puan Amira Razad Mohd Mustafa of MMC-Gamuda, the project delivery partner for the SBK and SSP lines, then spoke on the topic of structures and infrastructures, focussing on safety sustainability and standardisation.

This session was moderated by MRT Corp SBK Line Project Director Datuk Marcus Karakashian.

The afternoon session began with a talk on architecture by Puan Aniza Abu Bakar of MMC-Gamuda. She presented station optimisation through standardised line wide typology and application for site specific stations.

This was followed by a presentation from MRT Corp Planning and Design Deputy General Manager Ir Muhammad Zulqarnain Ismail on building control, railway protection zone regulation and compliance. He highlighted on incidents, regulations, instrumentation and monitoring.

The seminar closed with a talk on transit systems by Mr Thilagaraja Punusamy of Electrical and Mechanical Systems, MRT Corp who explained on the systems required for a modern transit system. Among the systems required are the electric train, signalling and train control, power supply and distribution and telecommunications and interface and integration of railway systems.

With an attendance of 450 participants for this one-day Seminar and with the overwhelming participation by relevant rail practitioners in all Q&A sessions, it was very evident that the objective of Seminar had been achieved. 📍



■ **FULL HOUSE:** A view of the participants of the seminar.

HAPPENINGS



CHOSEN ONE: One of the Bumiputera Contractors for the MRT Sungai Buloh-Serdang-Putrajaya (SSP) Line being selected via balloting on 25 July 2017.



HAPPY FACES: Affin Hwang Capital Group visited the MRT Operations Control Centre on 10 August 2017.



ON SITE: Laila Talib College, Sarawak students visited the Sentul West MRT Station site on 14 September 2017.



FRUITFUL VISIT: Graduates of the MRT Young Entrepreneurs Programme II visited the MRT Operations Control Centre on 20 September 2017.



ENGAGING THE KIDS: MRT Ceria, where MRT Corp hosted kindergarten children at the MRT Information Centre, Seri Kembangan was held on 26 September 2017.



LEARNING EXPERIENCE: Universiti Kebangsaan Malaysia (UKM) visited the MRT Information Centre Seri Kembangan, on 9 October 2017.



SATISFACTION: A delegation from the Changhua County Government, Taiwan paid a visit to MRT Corp Headquarters to learn more about the MRT Sungai Buloh-Serdang-Putrajaya (SSP) Line on 19 October 2017.



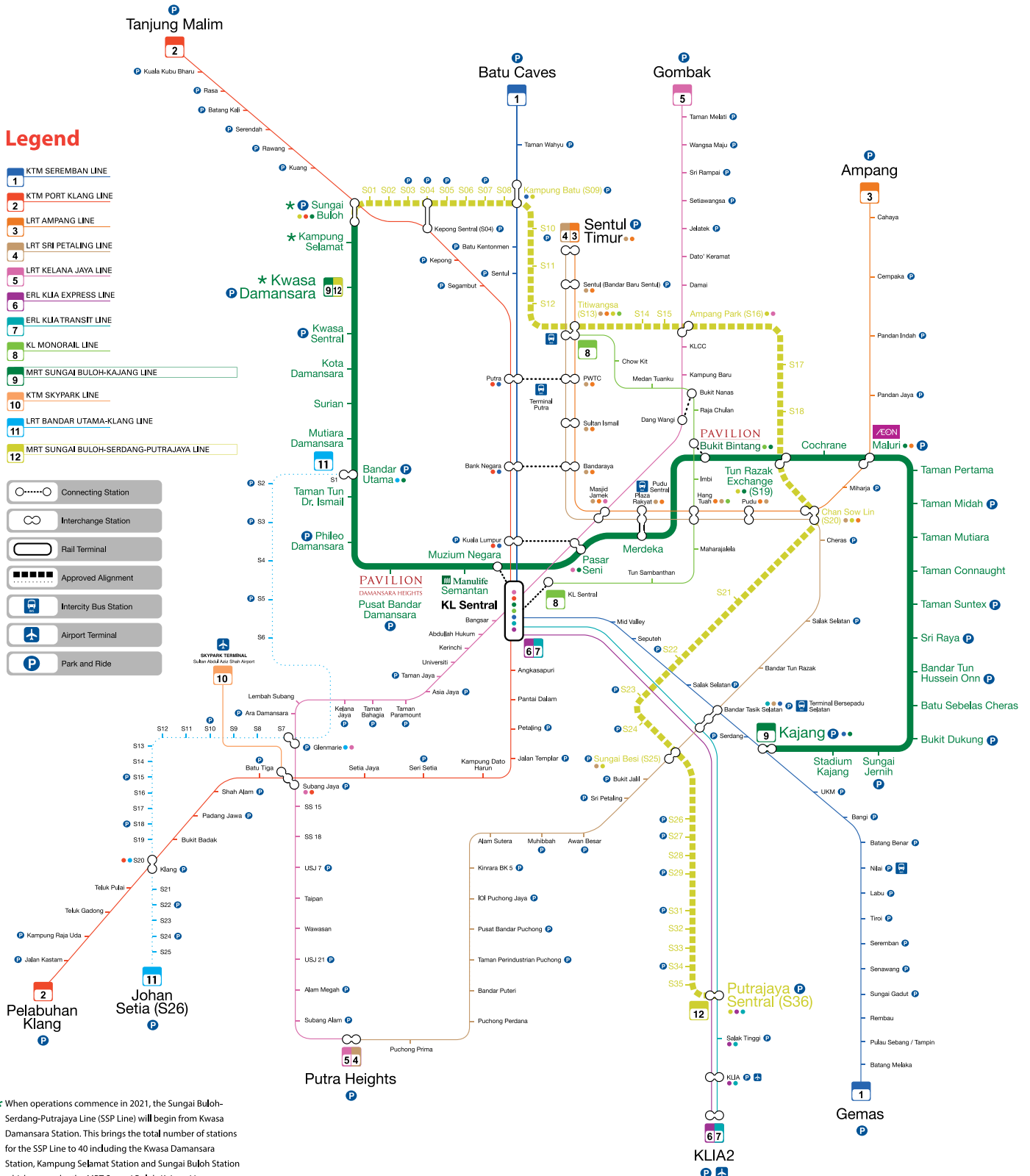
GAINING INFORMATION: MRT Corp participated in the SME Annual Showcase and Conference 2017 (SMIDEX) held at MITEC Kuala Lumpur from 15-17 November 2017.

KLANG VALLEY RAIL TRANSIT MAP

Legend

- 1 KTM SEREMBAN LINE
- 2 KTM PORT KLANG LINE
- 3 LRT AMPANG LINE
- 4 LRT SRI PETALING LINE
- 5 LRT KELANA JAYA LINE
- 6 ERL KUALA EXPRESS LINE
- 7 ERL KUALA TRANSIT LINE
- 8 KL MONORAIL LINE
- 9 MRT SUNGAI BULOH-KAJANG LINE
- 10 KTM SKYPARK LINE
- 11 LRT BANDAR UTAMA-KLANG LINE
- 12 MRT SUNGAI BULOH-SERDANG-PUTRAJAYA LINE

- Connecting Station
- ∞ Interchange Station
- Rail Terminal
- ▬ Approved Alignment
- ✈ Intercity Bus Station
- ✈ Airport Terminal
- P Park and Ride



★ When operations commence in 2021, the Sungai Buloh-Serdang-Putrajaya Line (SSP Line) will begin from Kwasa Damansara Station. This brings the total number of stations for the SSP Line to 40 including the Kwasa Damansara Station, Kampung Selamat Station and Sungai Buloh Station which are under the MRT Sungai Buloh-Kajang Line (SBK Line). Therefore, the SBK Line will also begin from Kwasa Damansara Station. This will reduce the number of stations for the SBK Line from 31 to 29 stations.